

ATTACHMENT TO NOTICE OF ALLOWANCE

Applicant's after-final amendment received on 11/29/11 has been entered. Claims 1-2, 6-8, 13, 16-17, and 19-20 are now canceled. Claims 3-5, 9-12, 14-15, 18, and 21 are currently pending in the instant application.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with 12/8/11 by J. D. Evans. The application has been amended as follows:

1. Claim 12 has been rewritten as follows:

12. A prostate cancer stem cell obtainable by the method of Claim 3, wherein said prostate cancer stem cells have high *in vitro* proliferative potential, have higher colony forming efficiency than $\alpha_2\beta_1$ integrin^{low} CD133⁺ prostate cells and can form cancerous prostatic-like acini in an immune-compromised non-human animal model.

2. Claim 21 has been canceled.

The following is an examiner's statement of reasons for allowance: applicant's amendments to the claims and the examiner's amendment set forth above have overcome the rejections of the claims under 35 U.S.C. 112, second paragraph, for indefiniteness, and the 103 rejection of the claims over Collins et al. in view of Mangano. In regards to the 103 rejection, the method claims as amended now recite that the bound cells are selected for expression of CD133, and isolated for expression of CD133, CD44, and $\alpha_2\beta_1$ integrin, and the product claims now recite that the prostate cancer stem cells expressing CD133, CD44, and $\alpha_2\beta_1$ integrin exhibit high *in vitro* proliferative potential, higher colony forming efficiency than $\alpha_2\beta_1$ integrin^{low} CD133⁻ prostate cells, and the ability to form cancerous prostatic-like acini in an immune-compromised non-human animal model. Collins et al., the closest prior art, does not teach or suggest the selection and isolation of prostate stem cells or prostate cancer stem cells bound to collagen based on CD133 expression. Further, while Collins et al. teaches a method for isolating a population of prostate stem cells comprising stem cells which inherently expresses CD133, CD44, and $\alpha_2\beta_1$ integrin by selecting prostate cells for CD44 expression and rapid adherence to collagen, and Mangano et al. provides motivation for isolating prostate cancer stem cells using the Collins et al. method, neither reference teaches or reasonably suggests that prostate cancer stem cells expressing CD133, CD44, and $\alpha_2\beta_1$ integrin would exhibit the claimed phenotype of high *in vitro* proliferative potential, higher colony forming efficiency than $\alpha_2\beta_1$ integrin^{low} CD133⁻ prostate cells, and the ability to form cancerous prostatic-like acini in an immune-compromised non-human animal model.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Following entry of this examiner's amendment, claims 3-5, 9-12, 14-15, and 18 are considered free of the prior art of record and are allowed.

Any inquiry concerning this communication from the examiner should be directed to Anne Marie S. Wehbé, Ph.D., whose telephone number is (571) 272-0737. If the examiner is not available, the examiner's supervisor, Joseph Woitach, can be reached at (571) 272-0739. For all official communications, the technology center fax number is (571) 273-8300. Please note that all official communications and responses sent by fax must be directed to the technology center fax number. For informal, non-official communications only, the examiner's direct fax number is (571) 273-0737. For any inquiry of a general nature, please call (571) 272-0547.

The applicant can also consult the USPTO's Patent Application Information Retrieval system (PAIR) on the internet for patent application status and history information, and for electronic images of applications. For questions or problems related to PAIR, please call the USPTO Patent Electronic Business Center (Patent EBC) toll free at 1-866-217-9197. Representatives are available daily from 6am to midnight (EST). When calling please have your

Art Unit: 1633

application serial number or patent number available. For all other customer support, please call the USPTO call center (UCC) at 1-800-786-9199.

Dr. A.M.S. Wehbé

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Primary Examiner, A.U. 1633